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IT is recognized that an inexpensive fire-proof construction is, from a practical point of view, the most valuable contribution which can be made by science to the art of building. Last week we promised to present to our readers some statement of the important work done by Mr. Sydney Myers, manager of the Merchants', Farmers', and Mechanics' Savings Bank of Chicago, in building houses for the working-classes in that city. In fulfilling this promise on page 281 of our present number, we have occasion to include a very interesting, and what seems to be a very practicable, project for effecting this most desirable reconciliation between economy and the provisions to secure safety from fire. We need hardly apologize for giving up so much of our space to the consideration of a subject so important. For many years it had been the policy of this bank to loan money to its depositors on the security of their land, to assist them in building thereon. But the city ordinances which came in force after the great fire requiring a more substantial structure than could be built with the usual amount of those loans, the bank, in order to meet the emergency in the most effective manner, in October of 1874 offered a prize of $1,000 for plans, specifications, and tenders of contract, for the best and cheapest approximately fire-proof dwelling-house, occupying not less than 5,500 cubic feet, and containing at least five rooms; also for a store and dwelling-house combined, to occupy not less than 30,000 cubic feet. The fire-test was to be applied, under the direction of a committee of judges, to the first building erected. Previous to Jan. 1, 1875, more than thirty sets of plans were received in reply to this invitation; and on the 16th of the following August, after a fire-test described in the report of the judges (see page 281), the prize was awarded to Mr. A. J. Smith, architect, of Chicago, for a one-story house 20′ x 43′, costing $1,200; for a two-story house, 18′ x 26′, costing $1,700, and for a store and dwelling combined, costing $3,600. The plans, elevations, and sections of the first two buildings, are elsewhere reproduced.

THE universal intelligence and public spirit manifested in this enterprise deserve more than a local recognition. It was a well directed movement towards the accomplishment of that union between architecture (as an art and a science) and common building, which on page 253, in referring to the great Philadelphia building-operations, we mentioned as one of the urgent needs of civilization. In England the greatest masters of architecture have been called upon to devote their most earnest study to this subject; and what progress may have been made in that country towards the scientific, artistic, and inexpensive construction of cheap houses, is mainly attributable, as we know, to their efforts.

"FEW buildings," says Mr. Sydney Myers, "are erected without the aid of those who loan money. If investors will scrutinize the architects' specifications, and require approximately fire-proof construction, and if underwriters will discriminate their rates in favor of buildings so constructed, it is believed that great conflagrations may soon be as rare in this country as they are in Europe, where like experiences in early time have secured the general adoption of preventive precautions such as are now sought to be introduced in the United States."

WE regret to learn, that, although the time for exhibition of the Castellani Collection of marbles, bronzes, terra-cottas, jewelry, engraved gems, and other objects of art, expired on the first of last July, but a very small part of the $300,000 needed for the purchase of it has been obtained. Negotiations, however, are in progress for the longer stay of this precious collection in New York.

IN our notice of the early parts of the second volume of Woodwards's *National Architect*, just received, we refer (page 280) to a project therein contained for the building of five small separate houses on an ordinary city corner-lot 25 feet by 100 feet. A project of a somewhat similar character is about to be carried out in the "East End" of Cincinnati by the well-known Emery Brothers of that city, who have just purchased a lot of land, 100 feet on Sycamore Street and 200 feet deep. They propose to improve this property by dividing it lengthwise in the middle by a court 30 feet wide and 200 feet long; the street-end of these two divisions they propose to occupy with small stores or shops,—two on one side of the court, and three on the other,—50 feet deep; on the remaining 150 feet in the rear of the stores they intend to build, on one side of the court, eight dwelling-houses 18 feet 9 inches by 35 feet deep, and, on the other, twelve dwelling-houses 12 feet 6 inches by 35 feet deep. These buildings they propose to rent for fifteen to twenty-five dollars each per month. In the improvement of real estate in our crowded cities, these propositions are worthy of consideration. There is a very large and increasing class of citizens of small incomes to whom an accommodation of this character in the heart of the towns would be of great advantage. If the conditions of life are such that we must be crowded in narrow spaces, independent and respectable homes such as are furnished by these projects are, in some respects, more convenient, perhaps, than apartment-houses.

M. AUGUSTE BARTHOLDI, who was a member of the International Jury at Philadelphia, and who is the projector and designer of the famous bronze statue of "Liberty enlightening the World," has prepared his Report on the Arts in America for the French Section of the Exhibition of 1876. It is mainly devoted to architecture, and in this, as in other respects, it is written in a spirit of conscientious, and not unfriendly criticism. In a somewhat arbitrary manner he divides the history of American architecture into four successive epochs of development. These, in order, are, first, the epoch of wood; second, that of brick and stone; third, that of iron; and, fourth, that of marble, granite, and free-stone, "indicating solid and durable opulence asserting itself in sumptuous and lasting edifices." If we were called upon to make a division of this sort, we should be disposed to mark the eras rather by a succession of styles than of materials; for, with the exception of marble and iron, the use of these materials has not been confined to any definite period, and at the present moment as much of our characteristic work is executed in wood and brick as in the other materials which he names. We may more philosophically designate our first period as the Colonial, in which we recognize a reproduction, in wood, brick, and stone, of the characteristic styles of the later Stuart and earlier Georgian dynasties,—a "Queen Anne style," on the whole, made up of slender orders, small mouldings, balustrades, flat arches, small stone work, and other features of the formal and ceremonious period of our forefathers; second, the Grecian, when the only correct style was borrowed by the builders from the publication of Stuart and Revett, and the temples of Attica found themselves transplanted, peristyles and all, into new pastures, there to do domestic service in a strange land; third, the Renaissance according to Paris, whose refined and ample language we trust we have not ceased to quote with increasing knowledge; and, fourth, the Mediæval, transferred direct from our English cousins (and not from

the French school of Viollet-le-Duc, as our critic states), and still maintained with persistent vigor. And now M. Bartholdi discovers all the styles existing side by side in our great cities, Greek, Roman, Mediæval, Saracenic, Egyptian, Palladian, Anglo-rustic, and what not, — a strange sight to an artist accustomed to behold in his own land but one visible language of art abundant in its resources of expression for all uses, and so refined by the polite culture of the schools that all other languages seem to him barbaric or provincial. Yet he recognizes a tendency to bold and original treatment of those old forms, and admits that the indomitable spirit of invention, which, in the industrial arts, created a triumph for our country at Philadelphia, has given a characteristic color to our eclecticism, and saved us from the weakness and insipidity of mere correctness. "These tendencies," he says, "working in the American mind, cannot fail to lead to great results; for the Americans are adventurous beyond all other people: of course, they make mistakes, as all adventurous spirits sometimes must; but, out of the infinite number of their attempts, some must infallibly succeed, and do honor to their spirit of invention." When our newly established schools of architecture shall have sent forth into the midst of this bold and bustling New World a class of young men accustomed to study, and thoroughly educated in the fundamental principles of art, the next M. Bartholdi who criticises our work will find, doubtless, results infinitely more worthy of commendation.

WE regret that the French Government did not include an architect in its commission at the International Exhibition. For after all, M. Bartholdi, though a man of genius and an artist, is not an architect; and his criticism cannot, from the nature of things, have the value of an analysis made by a mind trained in the practice of building, and thoroughly educated in the theory of architecture. The English Commission also failed in this respect. Our architecture has thus lost an admirable opportunity of knowing itself. To this end the report of a foreign architect, expressed with official care, "a Daniel come to judgment," would doubtless have been of very great service, and thrown unexpected light upon our development in this department. It is blame, and not praise, that is most wholesome in our present condition. We need not to be reminded of good qualities which are really good; but qualities which we think good, but which are really bad, would be infinitely benefited by a frank and impartial criticism. Our opinions are too much overshadowed by our own work to enable us to take a just view of our attainments and achievements in architecture. That characteristic quality of boldness and invention of which M. Bartholdi speaks, and to which we had occasion to refer last week, is admirable when restrained by education, but, in our condition of half-education as a profession, is sure to betray us into ungrammatical extravagances. Among ourselves, we see plainly enough the crudities of our neighbors; and they, in turn, like the Pharisee, doubtless thank Heaven that they are not as we are. We have committed ourselves to wood, brick, iron, and stone, more extensively, and with less reserve, than any other nation has done in the same length of time. A professional tour among these crowded monuments of progress by a foreign architect of large experience and trained judgment would be to him, we believe, one of the most interesting revelations ever made by travel; and, if he should give to the world the result of his studies in a candid and kindly spirit, the publication would meet with a great acceptance, certainly on this side of the water, and would be of infinite service to the cause of art. A writer of graphic power with pen and pencil — power such as M. Félix Narjoux, for instance, displayed in his *Journey of an Architect in the North-west of Europe*, lately quoted so largely in these pages — would find in our cities East and West abundant food for comment.

M. BARTHOLDI'S remarks concerning American cabinet-work are discriminating, and worthy of especial note. He says that our wood is well prepared and combined, but that the results indicate a too exclusive use of mechanical contrivances, which lead our cabinet-makers to aim at producing the most striking effects possible by the combination of easily and cheaply worked details. "The parlor-cars of the American railways are the highest expression of this peculiar American style." We cannot but acknowledge this as a most palpable hit. As a rule, our carvers are foreigners, though we are happy to note that the exceptions are growing, and machine-carving doubtless unduly supplants the work of the hand. We have wood pressed, moulded, turned, and tortured into shapes by ingenious patented processes, but nothing approaching a school of carving, save what the enterprising ladies in Cincinnati are developing with happy promise of success. By these processes a conventional scroll of the Louis XIV. style finds itself exactly repeated on the backs of innumerable chairs and sofas of the same pattern, on the heads of countless bedsteads, on the legs of all our pianos, on drawer-pulls and lock furniture sold by the gross, until, wherever we turn, we are reminded that household art has much to undo before it can prevail. In the midst of this baneful abundance, the honest hand-work of our ancestors in the heirloom furniture of the last century becomes doubly precious. Our French critic, however, does not overlook the "happy combination of French and American ideas" produced in the work of such houses as Marcotte, Pottier & Stymus and Herter, and the great influence for good produced in this country by the decorative movement in England. We cannot but avail ourselves of this opportunity to say that the use of Japanese *motifs* in the furniture and ceiling decorations of Herter, and perhaps of one or two other great manufacturers, marks an era in household work of the highest class. The inexhaustible resources and suggestions offered by these ingenious Orientals as regards form and color for decorative work of all kinds are a continual wonder. One who studies them becomes at once enriched. The power of various artistic expression can never fail so long as it can recruit itself from the screens, the fabrics, the vases, the book-prints, and the minor objects of industrial art, produced by this singular nation.

M. BEULÉ ON GREEK POLYCHROMY. — II.

IT will not be amiss, first of all, to tell in what condition color has been found on the temples. If the temples are still standing, it is to be looked for in the hollows and undercuttings, which are naturally protected from exposure to weather, on cornices, pediments, triglyphs, beak-mouldings of antæ-capitals. One must climb with a ladder, and study close at hand, with minute attention, all the nooks of the stone or marble in which color may have been sheltered. From smooth walls, columns, flat surfaces, the color, if it ever existed, has naturally fallen off. A slight injury is enough; the color, gradually scaling off, in time disappears altogether. Often chemical decomposition has taken place: perhaps an incrustation has developed of itself: perhaps dust has incrusted the painting: — only a grayish, wrinkled surface is to be seen. But, if this protecting crust is carefully removed with a cutting instrument, the color appears at once, clear, brilliant, and fresh as if applied yesterday: the contact of the air, however, makes it fade and disappear rapidly.

If the temples are overthrown, it is in the earth that we must look for colored fragments. The dampness of the earth preserves the precious remains of painted decoration, and gives them to light in admirable brilliancy. Unluckily, the colors thus brightened, that is, affected by terrestrial salts, are only the sooner destroyed by the light, and disappear very quickly; though stucco, by virtue of its grain, and the thickness of the paint upon it, preserves better than stone the colors in which it has been clothed. It is, then, very important that whoever uncovers a monument or a fragment should note at once the colors of which it bears marks: soon it is too late. For this reason, the testimony of travellers and explorers is precious, and was especially precious formerly, when discoveries were easy and frequent. When painted fragments are taken from the ground, it is impossible to be deceived, so fresh and recognizable is their color: later, mistakes are easy. Concerning monuments which remain standing, it must be granted that contradiction is by no means inevitable [*sic*], because time has changed the colors, and made their traces pale and fugitive. Thus, on the wall of the Theseum, Mr. Semper, one of those who have accepted the theory of polychromy with most exaggeration, has thought he saw blue; and others, yellow. M. Paccard has seen red on the tympanums of the pediments of

the Parthenon, while I have seen blue. Science can only wait in suspense when testimony is contradictory. We can only accept what is certain and uncontested; later new discoveries will settle debated questions.

With these limitations, let us take the Doric temple, examining it from floor to roof, and assign the colors wherever they have been found. The proofs shall all be borrowed, as is proper, from the temples of the sixth century B.C.

Was the *floor* itself painted? The temple of Ægina offers an example. In the pronaos and in the cella there was a coating of stucco six millimeters thick (two inches and a quarter, say), covered with vermilion. The vermilion was even thicker than the stucco, as if many successive coats had been applied during centuries. It may be supposed, in fact, that it was necessary to repair the injuries of a painted surface which the feet of men frequently trod. On this red ground were there mosaics? This it has been impossible to determine.

The *steps* have not yet shown any trace of color. Nevertheless I can by anticipation suggest the temple of Jupiter Olympius at Agrigentum, in which the rebates of the courses still retain stucco which must formerly have received color.

At the time of Pisistratus the *columns* were painted at Corinth. They still preserve the stucco which clothed the stone; but the color can no longer be determined. It has been assumed that these columns were painted to imitate granite; but this theory, which all the Greek customs refute, was evidently inspired by the influence of the Egyptian system. At Metapontus the columns are covered with yellow stucco, and the color is not applied; it is incorporated in the stucco. At Egina the tint seems also infused into the stucco; but the stucco is thin, and the color very pale, so that it is difficult to make sure of any thing. Its light yellow, however, is very recognizable; and this coincidence with Metapontus has some importance.

The *capital* was painted. Egina favors the supposition; for the capitals were covered with stucco. On this stucco remains a dark shade of yellow ochre, which M. Garnier attributes to a mixture of red and an oxidation of the gilding which relieved the ornaments. Here we have only suppositions; but the singular capitals of the portico at Pæstum are no supposition, where the honeysuckles stand in relief, being protected by a coat of color, while all around them the soft stone of the capital, less protected, was eaten by the salt wind from the sea. It has followed that what formerly was painted is to-day relieved and bears curious testimony to the decoration of the capitals. I look among Greek vases, not for a proof, but for an indication. I see in a vase reproduced by Hittorff analogous motives, — honeysuckles set in scrolls. Those who ascribe an egg moulding to the Doric capital, as M. Garnier has done in his restoration of the temple of Ægina, take for authority the capital of the great tomb at Corneto. But to us, at least for the time being, Etruscan art is not sufficient authority to fill the voids in Greek art. I know that the Ionic order afterwards used these eggs on the torus beneath the cushion of the capital, and by analogy they might be supposed to be on the echinus of the Doric capital. Without judging of their effect, — instinct saying whether or no the eggs would deform the profile of the Doric capital, and change its character, — I content myself with maintaining that no authentic example of such an ornament is to be found on Greek buildings of the sixth century before Christ. There is, on the contrary, an example of honeysuckles alternating with water-lilies, and springing from an elegant scroll.

Did the *abacus* wear a meander, as in following centuries? Proof is lacking; we must wait.

The *architrave* is found at Ægina to be painted, without ornament. Hittorff adduces very fine terra-cottas, friezes of vases, on which are represented the entablatures of temples. Reminiscences of the crowning features of temples have given the motive for the crowning features of vases. Below the frieze, in the part which seems to correspond to the architrave, we see great running scrolls formed of ivy and bay leaves. These terra-cottas, whose ornaments are in relief, do not belong to the archaic epoch; and the ivy, an attribute of Bacchus, has its appropriate place on vases. The induction can hardly be drawn from the frieze of a vase to the frieze of a temple. The scroll-ornaments which M. Garnier supposes in his restoration are likewise borrowed from monuments of a very different kind. I do not say that the architrave cannot have been decorated; nevertheless, the shields which were afterwards hung on it, the inscriptions which were put there, make me think that it remained plain: so important a decorated member would not have been concealed or interrupted. It is certain that as yet nothing has been found on the architraves of the sixth century, but a flat red color.

The *frieze* had its triglyphs painted blue. In all countries, — in Sicily, at Athens, at Ægina, — the testimony of Vitruvius is confirmed by buildings. The old Parthenon has left us triglyphs on which the blue is still to be distinguished. The wall which bars acess to the Acropolis showed visible traces of blue on its triglyphs, where I found it buried under twenty feet of *débris*. At Ægina, Leake, Cockerell, Blouet, Ottfried Müller, successively saw blue on fragments of triglyphs which they found buried in the soil. Their testimony is unanimous; but the color has since disappeared.

On the band which unites the triglyphs, and which is called the *tænia*, there was red. Leake, Blouet, and Ottfried Müller have verified it by the Temple of Ægina. It no longer exists on the listel of the exterior order; but M. Garnier noticed it on the listel of the architrave of the pronaos running all along the band, with inverted honeysuckles. It is, perhaps, allowable to transfer this decoration from the pronaos to the exterior entablature. The *guttæ*, again, were blue, like the triglyphs.

The *metopes* were sometimes sculptured: in this case the ground was red, as is evident at Selinus. When the metopes were not sculptured, as was more commonly the case, what was their decoration? Was it simply a red color? Or were there put upon this red ground, vigorously opposed to the ground of the triglyphs, painted ornaments, animals, monsters, to justify the Greek name, zoöphorus, of the frieze? I could willingly suppose it; but still the proof is lacking. At least we must bear in mind the white marble slabs slipped into grooves between stone triglyphs, and in temples built entirely in stone. Why seek out a finer, more brilliant material, only to smear it with red? Was it not, rather, in order to put finer painting upon it? The friezes of Sicilian vases which I have just cited have metopes decorated with honeysuckles and complicated scrolls, combined and opposed so as to fill a square. Unhappily the testimony of these vases, I repeat, cannot reasonably be applied to the archaic epoch.

The *cornice* gives us blue on the mutules. This is found constantly in Sicily, at Ægina, and at Athens. Between the mutules was red; and the band beneath them was red. The guttæ were planted on in white marble, or painted yellow, as at Ægina. The corona, of which a fragment has been carried to Munich, was painted red. On this ground was there a honeysuckle, alternately upright and reversed, set on a spiral, and painted green and blue? The position of this fragment, its ornaments, and their color, have been disputed: this point must therefore be left undecided.

The *beak-moulding* of the raking cornice of the pediment, and of the anta-capital, is always ornamented with leaves, alternately red and green, or red and blue, or even, what is yet more archaic, red and brown. These leaves are defined by a white outline, which, in the great ages of art, was gilded; whether they were in more ancient times is not known.

The *pediment* is painted blue, the color of the sky, against which the statues best detach themselves. We have just said that the raking cornice received a decoration analogous to that of the horizontal cornice. But the bed-mould has leaf-ornament of a different form, pointed, and divided by darts. The darts are blue; the leaves, red and green.

The *gutters* which crown the entablatures present magnificent ornaments, especially in Sicily. It is possible that the crowning members were set, or replaced, in the fifth century with the brilliancy and taste of that time. The gutters found in Attica show only olive-leaves and honeysuckle. There are two colors in the terra cotta, — a yellow on a brown.

Finally the *tiles*, the *acroteria*, the *antefixæ*, every thing which was ordinarily of terra-cotta, was painted in the archaic epoch. Tiles of yellow and of bright red color have been found at Ægina, which suggest a sort of design on the roofs. In Sicily we find tiles painted above and beneath; we may then believe that the rafters of the gabled roofs were exposed on the interiors as in basilicas. The antefixæ bore a honeysuckle on a scroll, or Gorgon heads showing their

tongues, veritable monsters of strange character, which give a high idea of ceramic art from the sixth century, and prove what progress the invention of Dibutades had made. These Gorgons' heads have been found in the Acropolis: they belonged to the old temples of Athens.

AMERICAN VERNACULAR ARCHITECTURE.[1]

MR. WOODWARD'S architectural publications have, we believe, had a very large circulation, especially in the latitude of New York, and we do not doubt have had no unimportant influence upon builders' work in those regions. We have received the first five parts out of the twenty-four which are to constitute the second volume of his "National Architect." We have not seen the first volume, which, according to the publishers' notice, presents a thousand designs "in a shape to be placed at once in the hands of a builder for execution," and we are not aware to what extent this incredible promise has been fulfilled. But Mr. Woodward's enterprising advertisements are familiar to us all, and doubtless they have been the means of procuring a very large sale. The character of a work so vigorously disseminated becomes, therefore, a matter of considerable importance.

Judging from the appearance of the second volume, so far as received, the mechanical execution of the work is excellent, the plans are ingenious, compact, and economical, and the elevations are such as constitute the better sort of builders' work rendered familiar to us by countless repetitions in all parts of the country. They are, in short, the American vernacular architecture: on a level with the public demand, — no better and no worse. Any one who desires to know what the "American style" is will find it, if anywhere, handsomely set forth in this book. We do not think, however, that it competes in any respect with the work of architects. The business of the book apparently is to supply ideas concerning buildings: the function of the architect is to give form to the especial requirements of his client, to adjust the building to the site, to study the aspect and the grades; to give the structure all the grace, character, individuality, of which it is capable within the financial limits imposed; to meet all the conditions of ventilation, drainage, heating, plumbing, according to the best available science; to prepare detail plans and specifications; to obtain competitive estimates; to prepare contracts; to direct the execution; to decorate and complete — in fine, to create a work of art. His business is to improve, and not to flatter, the taste of his client. He creates new things not for the sake of their novelty, but by necessity, because there is something, some element in every problem presented for his study, which, in combination with the rest, is without precedent. Hence the infinite variety of artistic work. In the presence of books of this character it seems necessary to recall why architects exist at all.

Architecture can only be made easy by mechanical processes out of which must come mechanical results. Within these limits, and judging, as we said, from the portion of his work now lying before us, Mr. Woodward's publication is one of the best of its kind. It is not instructive for the architect as an artist and man of science, but for the builder who builds without an architect it must be full of inspiration.

There are two studies, not without interest, of five houses built upon one city corner lot twenty-five by one hundred feet. These houses are twenty-five feet deep by nineteen to twenty-two feet wide, and with this area, in a height of four stories, with basement and mansard roof, manage to provide in each a kitchen, parlor, dining-room, three chambers, eight bed-rooms, a "boudoir," a bath-room, dressing-room, two pantries, a store-room, and a fair array of closets. Of course these rooms are on a small scale, the largest having but fourteen by eighteen and a half feet area (or in the corner house fourteen by twenty); but they are all there, and very cleverly grouped indeed. Concerning the elevations it may be said that they are without genius, with no touch of originality, but safe, and at least as good as the average of New York city houses. These designs are further illustrated by three or four quarto pages of details.

The text connected with these two designs is, in full, as follows:

FIVE HOUSES ON ONE CITY LOT, 25 X 100 FEET.

In presenting this design in the shape it is, several objects are accomplished.

The front elevation is an elevation not only for five houses having a depth of twenty-five feet, but for five houses having any depth required, and any plan of the same width may be adapted to each of the five houses in the elevation.

The elevation also may be adapted to a variety of purposes by changes in the basement story, and be made useful as a public building, library, hall, school, or hotel, being then treated as one entire building. [The Italics are our own.]

This design, therefore, in the hands of an ingenious architect or builder, supplies the suggestions for a large number of distinct buildings, giving one single house twenty feet front; two houses, three houses, four houses, five houses, and one entire building for any purpose.

This design for five independent small houses, to be built on one corner lot twenty-five by one hundred feet, has frequently been carried out of late years in New York, and has accommodated a class unable to rent large houses, and unwilling to adopt the tenement and New York "flat systems." The independent house will always command owners or tenants not familiar with the "apartment" system; and the great objection to the arbitrary size of a New York city lot is, that, without great loss, it cannot be made available in the construction of houses of moderate capacity.

There is an additional page of text suggesting how this design can be converted into an apartment house.

These remarks do not throw any light upon the plans, which are set forth by engravings sufficiently clear and graphic; but they are worth quoting for the sake of the insight they afford into the true spirit of machine architecture. An elevation so elastic in its capacities would be well worth a careful analysis, if such process would seem to promise any revelation beyond the familiar mysteries of the T square and drawing-board.

The other designs in the numbers before us are for country houses, varying, it is said, in cost from $3,000 to $8,500. The plans are, without exception, excellent for common usage, although they do not, of course, contemplate any exceptional conditions of grade and exposure. But the elevations, as we have intimated, are commonplace, and the estimates of cost presented in each case seem certainly, in the present condition of the market, more honest than is usual in such publications.

It is proper to add, that, although the prospectus promises "complete working drawings and details of the original designs," the present volume so far does not fulfil the just expectation of the purchaser in this respect; for an occasional page of details is not a sufficient justification. The price of this work is fifty cents for each number, and the publishers offer special terms to old subscribers and to clubs.

Considering the large circulation and the apparent influence of these publications, we shall not fail to watch the development of the present volume with great interest; and, considering its undeniably representative character, we shall be more than pleased to be able to give expression in these pages to our satisfaction at any improvement in its artistic part.

We have also received the first parts of a new book by the same author, on alphabets,[1] which is offered at the same terms.

[1] Woodward's National Architect. Vol. II. Containing original designs, plans, and details, to working scale, for City and Country Houses. By Geo. E. Woodward, Architect. Geo. E. Woodward, Publisher and Importer. Copyright, 1877.

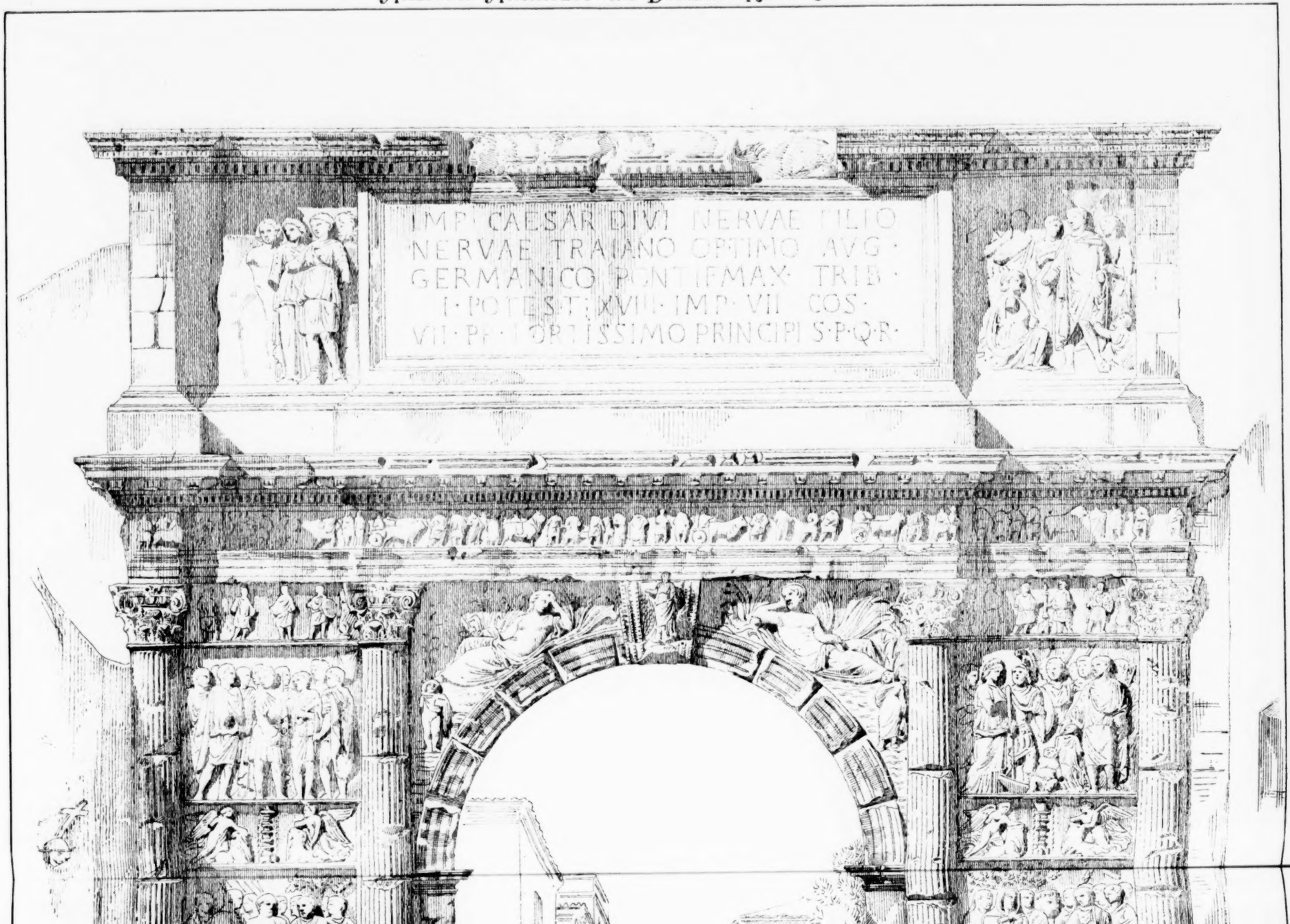
THE ILLUSTRATIONS.

THE LENOX LIBRARY, NEW YORK, N.Y. MR. R. M. HUNT ARCHITECT.

(73 Coal and Iron Exchange Building, New York.)

THE library building occupies a commanding site on Fifth Avenue, between 70th and 71st Streets. It is 192 feet in length parallel to the avenue, and 114 feet deep on each street, with an entrance court between the north and south wings 42 feet in depth from the front line, and 96 feet long. The main approach is from Fifth Avenue, through two massive gateways and the court. The service entrances are in the rear of the building, and communicate with 70th and 71st Streets by a passage-way which extends from street to street. The principal entrance-door opens into the vestibule, on first story, 24′ x 96′, from which all portions of the building are reached. It is in immediate communication at the south end with the first story library, or reading-room; at the north end with the similar room in that wing; in front facing the entrance with the janitor's office, cloak and retiring rooms; and, at the north and south ends, with the main stairs leading to the second story. This vestibule, which may be used as a gallery of sculpture, is well lighted from the court by two large windows, and also from the stair-halls at each side. The floor is laid in white marble tiles; and the walls are skirted with a dove-colored marble base. The first-story library, or reading-room, and the room at the north end of the vestibule, are each 108 feet long, 30 feet wide, and have six recesses 6′ x 24′, at each, or opposite each, side window. These rooms are 24 feet high, having level ceilings handsomely panelled and corniced. The windows are ten feet from the floor, to secure a large amount of wall room. The main stairs at the north and south ends of the vestibule, standing on the first story, lead by an easy ascent to the mezzanine or half story, and to the second-story landing. The south stairs do not continue higher than this, while the north stairs reach to the attic, or third-story landing. These stairs are of stone, and of remarkable construction. The balustrades are of iron scroll-work of fine workmanship. The stone platform-landings are supported by arches springing from carved stone corbels. The mezzanine or half story is laid out in apartments for the superintendent, with office, parlor, dining-room, a full suite of sleeping and service rooms with ordinary conveniences. From the second-story landings two doors open into the principal gallery, 24 feet wide and 96 feet long, parallel to the avenue. Three large windows open on the balcony overlooking the court, the avenue, and the park. The sides of the room are divided by five arcades, resting on imposts or piers which are decorated with niches, pilasters, etc. The ceiling has deep panels or caissons between the transoms resting on and supported by the pilasters. The walls are wainscoted in oak to the height of the niches. At the south end of this gallery

[1] Woodward's Ornamental and Fancy Alphabets, Monograms, and Titles. W. H. Steele & Co., 7 Murray Street, New York. Copyright, 1877.


IMP· CAESAR DIVI NERVAE FILIO
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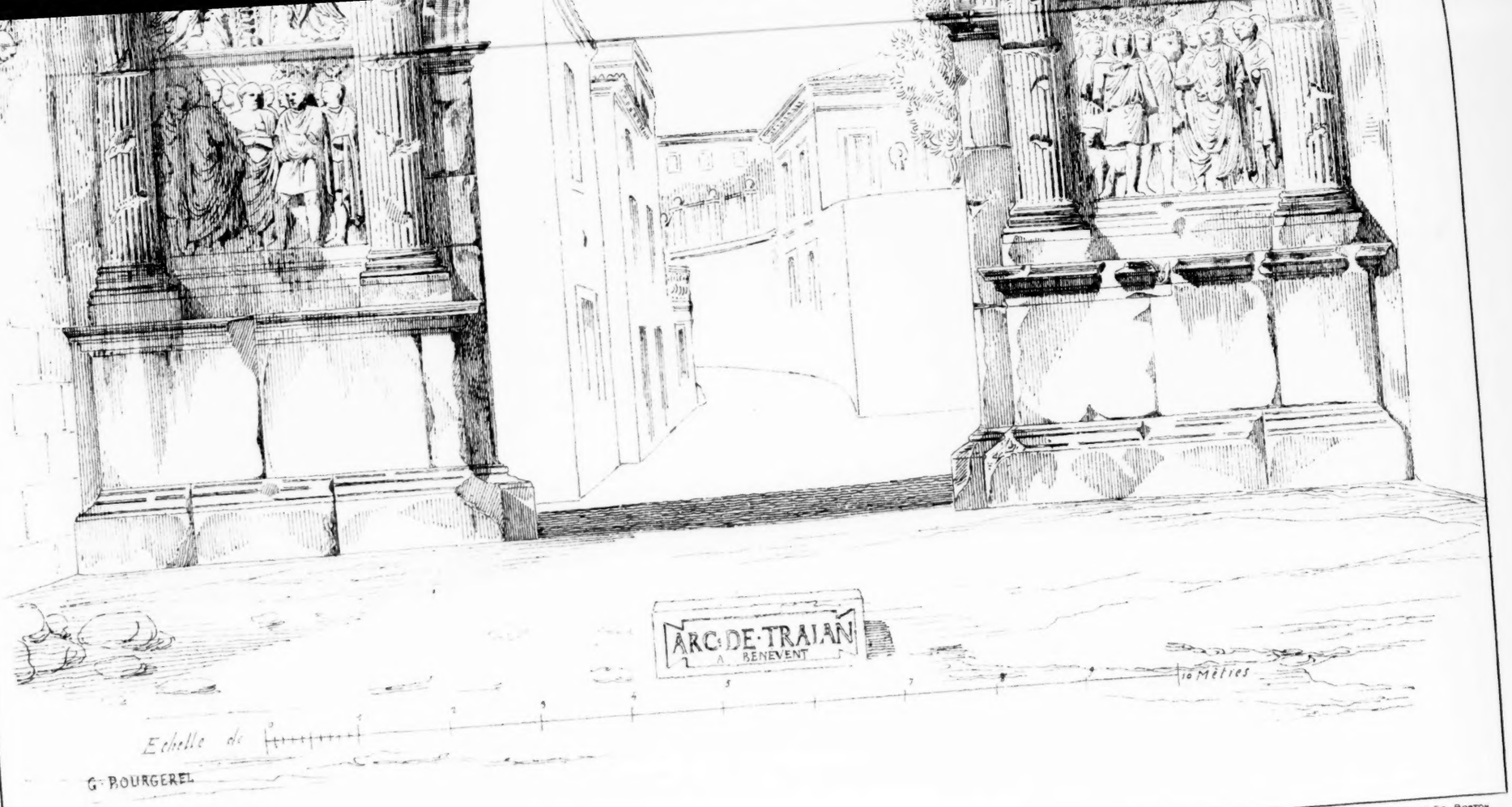
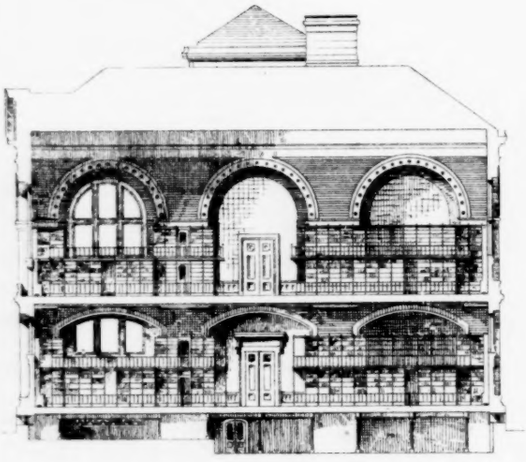


HELIOTYPE

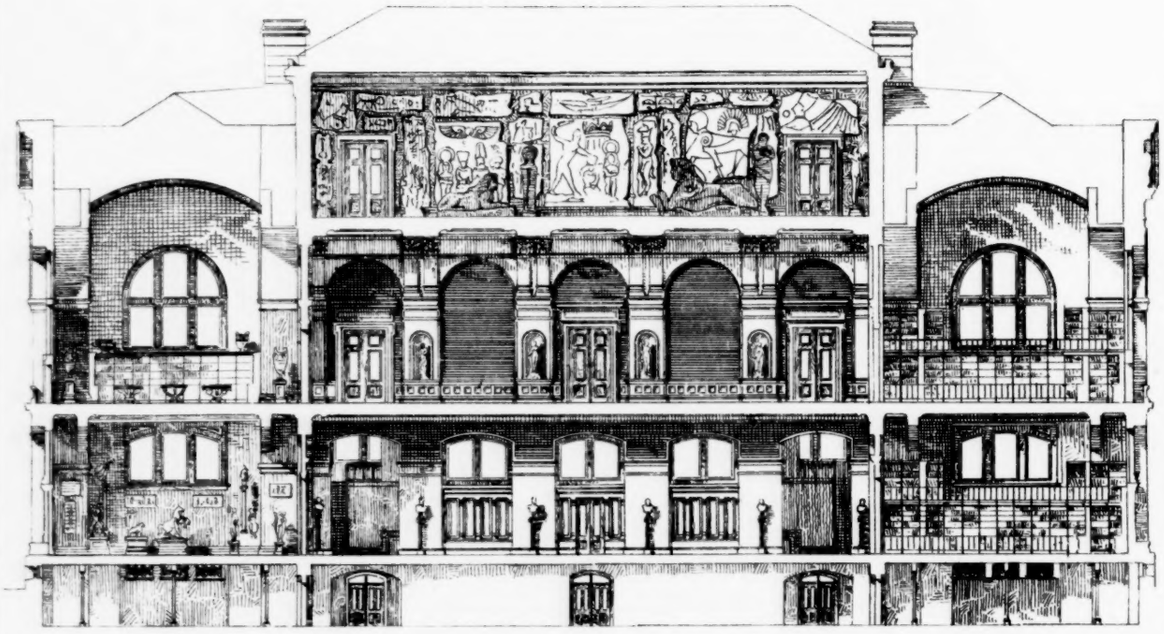
JAMES R. OSGOOD & CO. BOSTON

ARCH OF TRAJAN AT BENEVENTO, ITALY.



LONGITUDINAL SECTION
THRO READING ROOMS

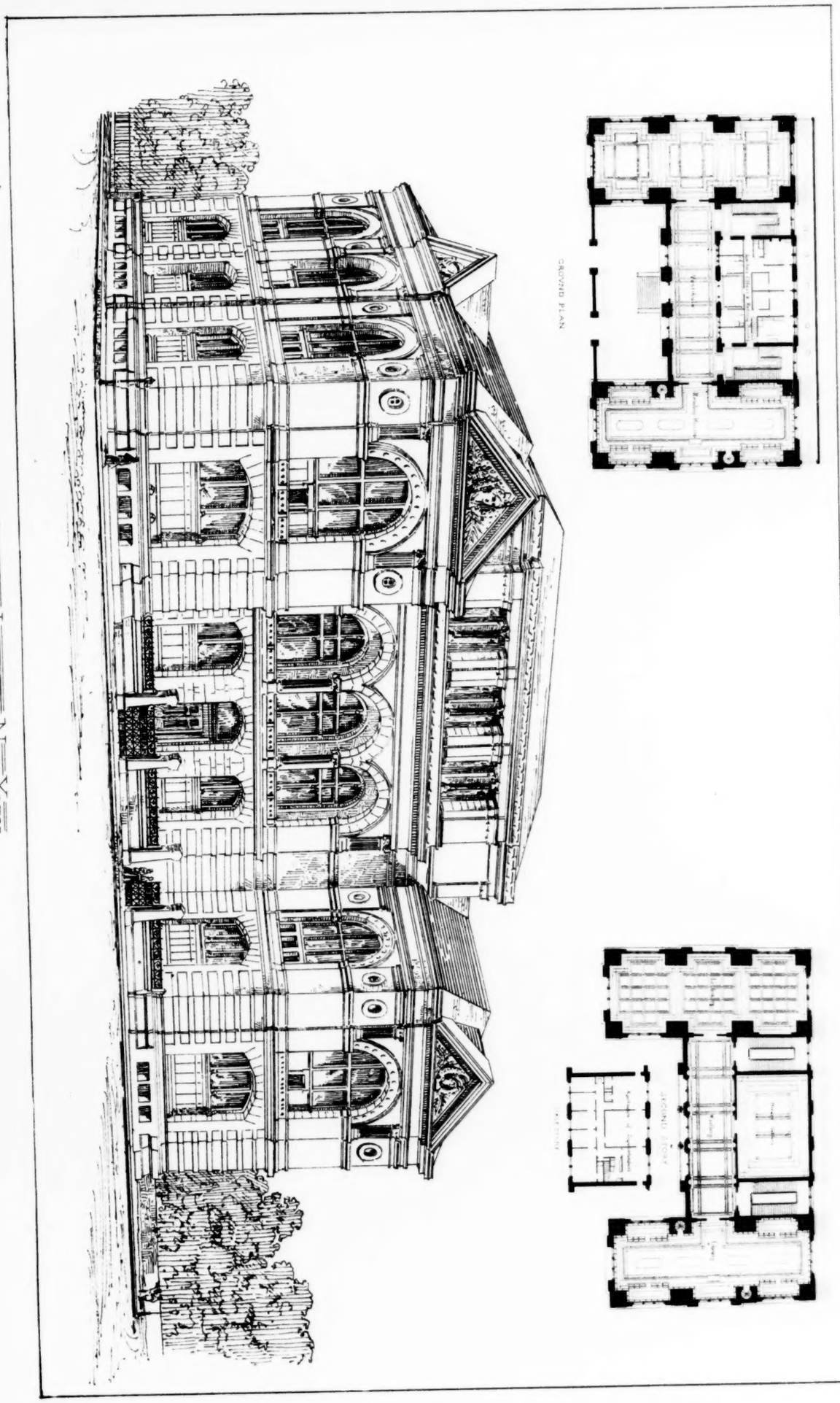
CROSS SECTION
THRO GALLERIES



LONGITUDINAL SECTION
THRO GALLERIES

LENOX LIBRARY NEW YORK.

MR R. M. HUNT, ARCHT.



LENOX LIBRARY, NEW YORK.

MR. R. M. HUNT, ARCHT.

is the second-story library, or reading-room, at the north end the similar room in that wing, and at the middle is the entrance to the picture-gallery. The reading-room and north rooom are both of the same dimensions, 30′ x 108′, with six recesses, each 6′ x 24′, at each, or opposite each, side window. These rooms have lofty vaulted ceilings 40 feet high in the middle, 35 feet high at the sides. The cornices are simply moulded, admitting the ultimate decoration of the ceilings in imitation of a *tenture*. The recesses are arched 30 feet high, ornamented with archivolts springing from the moulded imposts of piers. The picture-gallery 40′ x 56′ is well lighted from above by three large skylights, the ceiling gradually inclining downward from these to the cornice, which is carried around four sides of the room without breaks. The walls are skirted with a heavy dark wainscoting, the cap of which may serve as a rest for the lowest row of paintings: from this to the cornice the walls are perfectly plain. At the head of the main stairs at the north side is the door leading to the attic, or third-story gallery 24′ x 96′. This gallery may be used for the exhibition of paintings, etc., on three sides; the fourth being taken up by the windows, and a broad balcony extending nearly the whole length of the room, partly for access to the windows, which command a very extensive view, but also for viewing paintings or other objects arranged on the opposite side of the room. From this room access is also had to the roof and the rooms under it, including the tank-room, in which is to be maintained a supply of water sufficient for all the service of the building above the basement. The basement extends under the whole of the building, and will be employed for the storage of books, etc., boiler-room, heating coils, and ventilation conduits. In the boiler-room are four large boilers, the fire-pump, feed-tank, and other appurtenances of the steam and water works. The coal vault is to be under the rear passage in convenient proximity to the boilers. The heating apparatus is intended to work with the ventilation in such a manner as to secure a comfortable degree of heat, and at the same time change the air in the rooms once each half-hour, if necessary. The steam coils are generally placed in brick chambers in the basement; and the steam-pipes and warm-air dampers are so arranged, that the engineer has the control of the heating of the whole building without being compelled to leave the basement. The principal rooms of the building are in communication with each other and with the superintendent's office by speaking-tubes. From this office, orders can also be given directly to the janitor or engineer by the same means. The library-rooms in the south wing communicate directly by circular stairs of stone in the piers on both sides, and have been fitted with presses or bookcases of iron, the capacity of which for immediate use will accommodate not less than eighty thousand volumes. These presses are arranged in two tiers, with galleries, for convenience of access to which additional staircases of iron have been placed in two of the recesses on each floor. The corresponding rooms in the north wing and galleries of the centre will be devoted to the arrangement for exhibition and use of those various collections of rare and curious works, objects of art, etc., which require extended space, and special protection against loss or injury.

TRAJAN'S ARCH AT BENEVENTO, ITALY.

Trajan's Arch, or the *Porta Aurea* as it is called, is one of the most beautiful and best preserved, as well as among the less well-known, Roman structures in Italy. It was built about 114 A.D. in honor of the completion of a new road to Brundisium, and was dedicated to the Emperor Trajan by the Roman Senate and people. It is built of marble imported from Greece. It is 53′ in height, and is pierced by an archway which is 29′ high. It was formerly crowned by a statue of the emperor upon a quadriga. Both faces of the arch, as well as the walls of the archway, are covered with sculptures in relief, the character and present condition of which are sufficiently indicated in the illustration, taken from Bourgerel's *Fragments d'Architecture et de Sculpture*, which represents the outer face. In the spandrels of the arch are two recumbent figures, thought to represent the Danube and the Euphrates, or possibly the Rhine. The frieze is occupied by a triumphal procession, representing Trajan's triumph over the Germanic tribes. On the attic, at the left of the inscription, the gods are determining that Nerva shall adopt Trajan; while on the right, the conquered King of Dacia, Decebalus, kneels at the emperor's feet. The relief in the upper part of the left-hand wall-space again represents Trajan triumphing over Dacia; while below, Armenia is constituted a Roman province. The corresponding reliefs on the right are the marriage of Hadrian and Sabina, and Trajan receiving an Oriental ambassador.

PAPERS RELATING TO CHEAP FIRE-PROOF HOUSES IN CHICAGO.

DESCRIPTION OF MODEL FIRE-PROOF HOUSES ERECTED FOR MR. SYDNEY MYERS, ON SACRAMENTO AVENUE, CHICAGO.

Foundations. — Stone, laid in concrete.

Walls. — Brick; 14 inches thick in lower story, 10 inches thick above, built with a 2-inch hollow space, but made solid and corbelled out at each story to receive beams.

Beams and Rafters. — Of wood.

Smoke-Flues. — Lined with pipe of burnt clay.

Ceilings. — Concreted one and one-half inches thick below floor-beams.

Floors. — Smoothed boards on beams, stripped with bevelled strips one and one-quarter inches sloping to five-eighths wide, one and one-half inches thick; filled with concrete between strips; and covered with good pine flooring-boards.

Roofs. — Smoothed boards nailed on rafters; strips same as for floors; concrete between strips one and one-half inches thick, then covered with flooring-boards, and over all tinned and painted.

Walls. — Best three-coat work and hard finish; plaster laid on the brick without lath or furring.

Drainage. — Drain-pipes under basement-floors both to the front and rear.

Water. — City water has been introduced, and there is a bath-tub in second story, and sinks in kitchen and laundry.

Steps. — The front-steps are of Lemont marble; back-steps of brick stuccoed with Portland cement. All stairs inside are built of brick, and covered with Portland cement, and prepared to receive carpets. Grates and marble mantelpieces in front-parlors.

Walks. — The sidewalks are of Portland cement; walks in back-yards of plank.

Fences. — Of planed boards, painted with fire-proof paint. Park fences in front to protect trees and grass.

Yards. — All neatly graded and sodded.

Paint. — Parti-colored inside and outside.

Cornices. — Cornices of brick, laid with projections, and painted to contrast with face of walls.

Partitions. — All partitions are either of Loring's terra-cotta brick (about two-thirds the weight of Chicago brick), or of concrete laid up in supports of telegraph-wire.

Anchors. — All walls are thoroughly anchored, and hollow brick walls tied with wrought iron anchors one-half inch wide and one-fourth inch thick, set every five courses, and three feet apart horizontally.

Concrete. — All the concrete used for ceilings, roofs, floors, and partitions, is composed of one-half cinders, one-fourth mortar, and one-fourth plaster-of-Paris.

All the ceilings in the Sacramento-street houses are made on James John's patent, and supported from No. 17 galvanized iron wire, attached to tenpenny nails driven into the beams four inches apart.

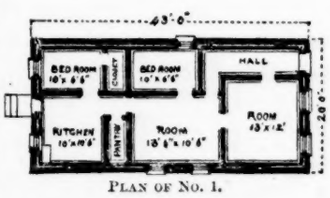
Specimens of ceilings supported on bevelled strips and split lath have been tested, and are found to resist fire. The cost of John's ceiling, including hard finish, is from seventy to eighty cents per square yard, and is given to the free use of the public. Floor and roof concreting costs about twenty cents per square yard.

No. 1.

FIRST PRIZE. — COST $1,200.

Cost. — Four small houses of substantially the same construction have been erected near the North-western Car Shops, north-west of Central Park, two stories high, tin and concrete roofs, with lots neatly graded, fenced, and sodded, with cisterns, etc., and are offered for sale for $1,800, — $500 cash, and the remainder in easy payments extending through five years or more.

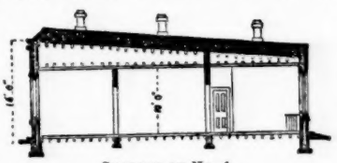
The houses on Sacramento Avenue are offered for sale for $3,000 each, including the lots and appurtenances, — $750 cash, and balance on easy payments. One-half may remain on mortgage as long as desired, if interest is promptly paid.



PLAN OF No. 1.

Location. — The location of all these buildings is on high ground, within ten or fifteen minutes' walk of the West Side Parks, a very considerable portion of which are improved with walks, drives, ponds with boats, fountains, etc.

Mr. A. J. Smith, architect, 77 Clark Street, was the successful competitor for the prize of $1,000; and these buildings were all erected under his immediate supervision and upon the mode of construction contained in his specifications.

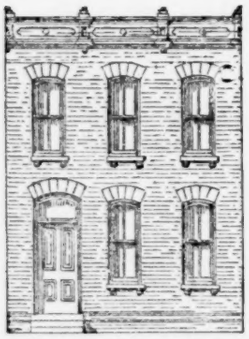


SECTION OF No. 1.

Mr. Thomas R. Jackson, architect, of No. 257 Broadway, New York, has been the consulting architect, and was employed to visit the principal Eastern cities, and decide upon the possibilities before the prize was offered, and aided the Committee of Award in analyzing and com-

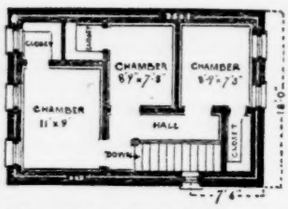
piling the information and suggestions contained in the thirty sets of plans and specifications submitted in competition for the prize of $1,000.

Objects in View. — To secure an approximately fire-proof building within easy financial reach of all industrious and frugal people, and thereby to demonstrate the practicability

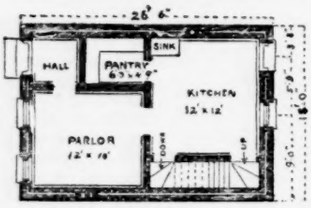


No. 2.

PRIZE DWELLING. — COST $1,700.



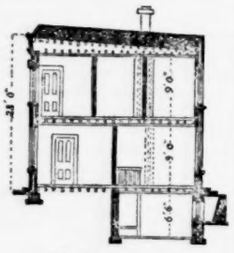
NO. 2. — SECOND FLOOR PLAN.



NO. 2. — FIRST FLOOR PLAN.

of rendering all new buildings practically fire-proof at reasonable cost. The *percentage* of additional cost is, of course, greater on small buildings than on larger and more pretentious ones as to size and finish; but it is the opinion of both architects that well-protected smoke-flues, hollow walls, and concreted roofs, floors, and ceilings, can be secured in the erection of the *average* dwelling at not exceeding eight per cent additional cost over the cost of an honestly constructed building with brick walls, but with inflammable roof, and unprotected beams and rafters.

NO. 2. — CELLAR PLAN.



NO. 2. — SECTION.

Results. — If the results of these efforts to prevent great conflagrations by eliciting practical suggestions for the more substantial building of cities and towns, shall be in a moderate degree successful, the originators of this special enterprise will feel fully repaid for some expenditure of time and means.

REPORT OF THE EXPERT COMMITTEE ON AWARDS.

CHICAGO, Aug. 16, 1875.

SYDNEY MYERS, Esq., *Manager Merchants', Farmers', and Mechanics' Savings Bank.*

Dear Sir, — The undersigned, your committee appointed to examine the plans and specifications submitted in competition for the prize of one thousand dollars ($1,000), offered by you for the best plans for an approximately fire-proof dwelling, beg to report as follows: —

After a thorough and complete examination of the various plans submitted, the award was made on the first day of February, 1875, to Mr. A. J. Smith, architect, Chicago, conditioned upon the faithful performance on his part of all the stipulations contained in your circular, involving the erection by him of a house constructed substantially upon plan submitted, said house to be tested by your committee, especially with reference to its fire-proof qualities; but its cost, construction, symmetry, and convenience to be also considered.

Having received notice that a block of four houses had been constructed on Sacramento Avenue, according to his specifications, under the supervision of Mr. Smith, we proceeded to the locality Saturday afternoon, the 14th inst., where we found the south one of the block furnished for occupancy, and exceedingly desirable as to capacity, neatness, and symmetry, as well as in respect to substantial qualities in the construction.

These houses have two stories and basement; stone front-steps, and steps to basement; hollow brick walls; Portland cement stairs inside, suppported on brick, and the same description of steps to the yard, both from the principal floor and from the basement; all partitions are of brick or concrete, and all timbers perfectly protected with the same materials; roofs covered with concrete, and then tinned and painted; all smoke-flues are lined throughout with burnt clay-pipe; the window-sills are of stone; and the window-caps of terra-cotta.

The houses are complete in all their details, with trees and grass in front enclosure, and sidewalk of Portland cement, and within every thing in order ready for housekeeping, including gas and water pipes, sinks, bath-tub, etc.; the yard, with neat, painted fences, and sodded, having all necessary appurtenances, even to hooks ready for the clothes-lines; and, as the cost is an important element in such experiments, we will add that the houses and lots are being sold for three thousand dollars ($3,000) each. Terms, one-fourth cash, and the remainder in easy payments. These houses cost, without the appurtenances, about $2,000 each.

We then proceeded to the north house, which was in an unfinished state, ready for the test. This building contained representative furniture, made of pine, equivalent to that in the furnished house, besides which the floors were thickly strewn with shavings; and, the further to facilitate a rapid and intense heat, the windows were left open, furnishing a perfect draught of air through the building.

The fire was started at five o'clock; and, after it had nearly burned itself out, water was introduced by fire-marshal Benner, and thrown against the walls and ceilings from an engine, to ascertain the effect of water thrown on the material when heated.

The result of this test was most gratifying to your committee, satisfying them that the building was, indeed, all that had been claimed for it, and entitling Mr. Smith to the full benefit of the award.

The only damage we were able to discover as the result of the test consisted in the falling of some of the rough coat of mortar, the partial burning of the window-casings, and discoloring of the window-caps by smoke.

In addition to the test made to the building itself, we also tested two sectional buildings, intended to show more particularly the construction of the roof and ceiling, of which there were two kinds, — one known as John's patent ceiling, with wires stretched at intervals of four inches to form the support of the whole mass of mortar and concrete; while the other, an arrangement of your own, in which the support for the mortar was formed by nailing wood lath to bevelled strips of wood on the under side of the joists, so that, when the concrete is filled in on top, it forms a self-supporting arch.

Both these sections were subjected to an intense heat for three-fourths of an hour, when water was applied, and they were found to be in apparently as good condition as before the test.

In conclusion, we repeat that the test was in every manner satisfactory to us as fully conforming to the requirements contained in your circular.

We cannot close this report without expressing our appreciation of the great work you have accomplished in demonstrating not only to Chicago, but to the whole country, that good, pleasant, and indestructible houses can be constructed at a moderate cost, and we hope soon to see them replace the unsightly, unhealthy, and unsafe buildings so much in use at this time.

Very respectfully yours,

LOUIS WAHL,
Representing Board of Public Works,
(per REDMOND PRINDIVILLE, *Pres't Board of Public Works*).
CHAS. W. DREW,
Representing the Chicago Board of Underwriters.
N. S. BOUTON,
Representing the Citizens' Association.
BEN. C. MILLER,
Representing the Board of Health of Chicago.
AMOS GRANNIS, *Representing Builders.*

SUPPLEMENTARY REPORT.

CHICAGO, Aug. 16, 1875.

We, the undersigned, were present at the fire-test described in the foregoing report of the awarding committee, and, having carefully examined the buildings described, take great pleasure in adding our testimony as to the correctness of the facts stated in the report, and desire to signify our concurrence in the same, and our high appreciation of the useful results of these efforts to bring substantial homes within the reach of all classes of our people, and the introduction of a method of building, which, if generally practised, will soon render our towns and cities exempt from great conflagrations, and, by reason of securing safer investments, bring more capital to our cities for investment for the benefit of *all* classes.

H. D. COLVIN, *Mayor.*
R. PRINDIVILLE.
J. K. THOMPSON, *Board of Public Works.*
M. B. BAILEY, *Inspector of Buildings.*
M. BENNER, *Fire-Marshal.*

NOTICE.

M. E. AND F. SAVINGS BANK.

This institution is now prepared to loan money for the erection of buildings within the limits of the city of Chicago. Preference will be given to depositors. Applications will only be entertained from those who have unencumbered lots of satisfactory value, on which they propose to erect buildings; and the money will be advanced as the buildings progress.

The construction recommended is illustrated in the model houses

on Sacramento Avenue, which have been thoroughly tested as to their fire-proof qualities, and in the special models of ceiling, roof, and floors, near the same.

CONSTRUCTION RECOMMENDED.

1. Fire laws of the city to be complied with.
2. Exterior walls to be hollow "between joists."
3. No furring or lathing allowed on exterior walls.
4. Flue-pipes of soft burnt clay to be used.
5. Ceilings to be covered with 1½ inches of concrete.
6. Floors to be protected underneath with 1½ inches of concrete.
7. Roofs to be protected with 1½ inches of concrete.

This bank has adopted a rule which will be strictly adhered to in future, — that none of its funds will be loaned for the erection of new buildings in the city of Chicago, unless at least the *first*, *fifth*, *sixth*, and *seventh* of the points of construction above given are applied.

SYDNEY MYERS, *Manager.*

CHICAGO, Aug. 16, 1875.

[Of course, the most important point in this system of fire-proof work is the method of rendering a construction of common floor joists or rafters practicably incombustible. The annexed diagram will sufficiently explain the contrivance

SECTION OF FIRE-PROOF FLOOR.

adopted. The roofs are treated in the same manner. The concrete is made as follows: ½ common cinders from rolling mills, screened; ¼ mortar; ¼ plaster of paris; mixed to the consistency of *mush*, poured in buckets on the rough flooring or laths, and tempered down with hose: this composition, it is said, will dry in twenty-four hours, "forming a hard, dry, white stone." — ED.]

ART IN SMALL MATTERS.

A RECENT article in the *American Architect and Building News*, upon "The Personal Relation of Architect and Client," suggests no little food for thought. It cannot be denied that the existence of any thing like a personal relationship between the architect and his client is, to a very great degree, either entirely overlooked or ignored by the average public. The first definition of the word "architect" which passes current is "a man who plans houses;" and what *raison d'être* there is for an architect, what excuse for his existence, while the builder still lives (who also "plans houses") is a problem remaining unsolved in the minds of many people. Exceptions to this only too prevalent notion exist in cases of the erection of large buildings, churches, insurance blocks, State capitols, and the like, when the usefulness of an architect is acknowledged. The element of design as one of the essentials to professional excellence is frequently passed over, save in instances similar to those above cited. As in many other things the smaller affairs are swallowed up in the greater, so in architecture we frequently find a belief that the latter alone should engage the study and close application of the projector.

It was the fortune of the writer to be present at a recent meeting of the members of a certain district where it was proposed to erect a schoolhouse. Plans had been submitted by an architect, and favorably considered by the committee. A competitor was in the field; and finally a motion was made to refer the selection of design and plans to a committee of architects, and thus decide a knotty point. Instead, however, of agreeing to this proper arbitration, an additional building committee of five men was chosen, on the principle, we presume, of safety in a multitude of counsellors; the election being preceded by remarks to the effect that a committee from the district would know more about the schoolhouse than an architect or any number of architects. Here the professional man was in the way, he was an expensive luxury; a schoolhouse was but a small matter, and the professional element, whether of design, or plan, or study, or thought, was waived aside. Of course "district committees" are not fair examples of the people with whom the architect comes in contact — and "contact" strictly describes his relations with some clients. Church committees are not always the most affable, particularly when time is limited; and in intercourse with them, or with building committees of whatever class, is brought into requisition one of those personal qualities which, in an architect, does much to stamp him with success; we mean his power of adapting himself to the caprices and whims of different people.

If "manners make the man," as the adage has it, in no profession do they have more influence than in that of architecture. A veneering, although in reality a sham, can be tolerated in some instances; but not a thin coating of impressive manner and a resort to thinner subterfuge, as in the case of the architect who hung his office-walls with scriptural texts to impress admirers of church work with his personal morality. Men who do so are doomed to live their little lives, accomplishing little.

It is not necessary that artistic feeling should have always a large field for its display; and in the lesser works and smaller commissions intrusted as much art may find expression as in the costly façades of more pretentious structures. A fatal mistake is only too often made in the undue haste in which a building project is carried out; more particularly, perhaps, in the erection of private dwellings. In this country, the building of a house is not, as a general rule, attended with that importance and peculiar interest of the client which are elsewhere evident, and there is a vast distinction between a "house" and a "home." An Englishman, for example, makes a home of his house, and in it sets up his Lares and Penates with a view to their guardianship for more than a twelvemonth; but American household gods are peripatetic, and a new house is had, and household ties, whatever they may be, are quickly severed at the option of the head of the family.

It is acknowledged that no two of the human species are precisely alike. This law in nature has not a counterpart in architecture; in fact, the tendency is strongly in the opposite direction, morbidly so, to the exclusion of individuality in design and arrangement of dwellings. House plans are, it is true, free from any thing like a copyright system; but their reproduction is due, however, not so much to their esteemed worth, in many instances, as to the fact that cheapness is an uppermost consideration.

It is with genuine pleasure that we observe a brick and light stone interloper upon the monotonous solemnity of brown-stone fronts, which fashion rather than a love of street-architecture has seen fit to erect upon eligible city thoroughfares. These oases in the deserts of sandstone façades are truly refreshing; and it is a good omen that many of the more recently laid-out avenues in our cities are being shorn of the custom which established long rows of blocks uniform in design as the proper adornment for their sides.

The picturesque treatment of a few houses upon a street may give it an entirely different aspect, not only by breaking that inevitable sky-line, about which a noted authority discourses so frequently, but by means of the color-contrasts possible in building material, which, although a comparatively small matter in itself, may carry no little weight with it.

The gradually increasing demand in this country for brick of moulded and ornamental patterns has almost placed this material in a new light. Its capabilities are unquestionably increased. The brick dwelling of twenty years ago is in great contrast to that of to-day wherein moulded brick have been judiciously and artistically introduced. There is art in laying brick. Effectiveness can be gained by brick laid in patterns; but one pattern is not by any means every pattern. The combination of several moulds, as in string-courses, can bring about good results or poor results; and upon the proper handling depends much of the general expression of the completed work. In cornices, as well as for the production of diaper patterns, these moulds prove invaluable; and the much-used and much-abused "dogtooth" has now to face a whole army of rivals.

While speaking of color-contrasts, a word is pertinent concerning the new departure in the painting of country houses, which finds favor in the eyes of the public. We refer to the use of Indian red and kindred colors in place of the drabs and grays so universally popular. This change offers a good example of the law of circularity, by means of which the red paint of our forefathers is brought into vogue again. Of course "red" is a very comprehensive term; but in the old gambrel-roof days the painted farmhouses of the country took to themselves a sturdy tone of color, which, almost unchanged to-day, offers a good basis for the coat-work of more expensive dwellings.

It may possibly be a yearning for things old which has recalled to our windows the small "lights" of other days, which, but a few years ago, shrank into insignificance beside the costly dimensions of plate-glass; or the adoption may instance another example of the great law above referred to: at all events, the re-instatement in favor has been most effective, and when rightly introduced, the small lights overthrow the objection frequently urged against them of obstructing the view from the window, and by their use a picturesqueness of expression is gained.

A good example of the "*ars celare artem*" in what might ordinarily pass for a small matter was seen the other day in a finely-executed piece of light stone carving. The carving was rich foliated work, extending round the three sides of a boldly-projecting chimney which ran from floor to ceiling in a broad and spacious hall. Upon the carved course was seen an industrious food-seeking bird pecking away among the leaves. He seemed to be there by accident, and aside from the skill of the execution, and the realism of the action and attitude of the bird, the art consisted in the position he occupied. It was not midway on the front of the chimney, it was not a mathematically-measured point, it was not a precise distance; there was no thought as to whether the object was equally balanced with any thing else: the bird was simply represented as though of his own free will he had flown to his perch among the stony leaves. In symbolic sculpture and carving, instances of much happy thought are frequently met, and under the carver's tool many a song is sung and many a story told. It is a delicate

example of tender thought in the architect, who, in the carved capitals of his chancel-columns, introduces with a pleasing reality the plants and the flowers which are wont to lift their heads in the vicinity of whatever country churches he builds.

CHETWOOD.

NOTES AND CLIPPINGS.

GOVERNMENT BUILDING AT THE CENTENNIAL. — District Attorney Valentine has been instructed by the Secretary of the Treasury to accept the sum of $938.18 in full settlement and satisfaction of the claim of the United States against the Centennial Board of Finance on account of the destruction of the Laboratory Building at Fairmount Park. This was the amount offered in compromise.

A QUICKSAND FOUNDATION. — The big pumping engine of the Providence (R.I.) water-works has broken down through its being placed over a bed of quicksand. The building still continues to settle; and it is understood, that, in view of this fact, the makers of the engine decline to repair and guarantee it. The building and engine cost $250,000.

THE OLD NEW YORK POST-OFFICE. — In making the necessary alterations, the lessees have discovered that the roof of the building is apparently as strong now as it was one hundred and twenty-five years ago. All the shingles and beams are of oak, and were originally hewn out with the broad-axe.

DESTRUCTION OF THE RAILROAD BRIDGE AT OMAHA. — Two spans of the Missouri River bridge at Omaha, 250′ each in length, were blown down, and almost wholly destroyed, during a violent storm, Aug. 25. The storm was from the north, and wrenched 500′ of the bridge from its connections, and hurled it into the river. The dismantled piers, so far as can be ascertained, are uninjured, as also the remainder of the bridge, 9 spans in length. The general opinion seems to be, that the accident was caused by a cyclone. The loss is estimated at about $350,000. It will probably take from two to three months to rebuild the structure. This bridge which connects Omaha and Council Bluffs is 2,750′ in length between the abutments, and has 11 spans. It rests on piers, each consisting of two hollow columns of wrought iron 1¾″ thick and 8½′ in diameter, which are sunk to the bed-rock of the river, in one case 82′, and filled with concrete and masonry. The bridge, which is 50′ above high-water mark, has a railroad-track and accommodations for horse-cars and ordinary travel.

THE OHIO COAL-FIELD. — Ohio's coal-field is a district 100 miles square, including the counties of Athens, Perry, and Hocking. This district has twenty-two feet of solid coal in five seams. The great vein is in places twelve feet thick, and nowhere less than six feet. Mingled among the coal-beds are inexhaustible beds of iron. The thickest is five feet deep at the outcrop; the thinnest, in places, sinks to six inches. But the thickness of neither seam is quite persistent: there are "waves" from time to time, which narrow the seam. The coal, on the contrary, may be said to run from hill to hill with perfect uniformity. Limestone is also present in great quantities.

AN INDIAN MOUND IN TEXAS. — The Corpus Christi (Texas) *Times* says that a mile or so from the ferry at Sharpsburg may be seen a round hill, forty or fifty feet high and a quarter of a mile in diameter. Though it is situated in a flat prairie, composed of black tenacious soil, it is itself formed of fine drifting sand; the top is hollowed out like a huge saucer. Indian spear and arrow heads, cut with a deal of patient and not unskilful work from flint rock, fragments of Indian pottery, and different kinds of vessels of variegated colors, are quite numerous. Here and there are human bones, doubtless belonging to Indian warriors; and recently the back-bone and skull of a skeleton have been discovered.

THE POUGHKEEPSIE BRIDGE. — The first caisson of the Poughkeepsie Bridge is now resting upon a firm foundation one hundred and ten feet below high-water mark, and the concrete to support the masonry is rapidly placed in it. A large force of men is at work; and granite abutments on two caissons will be built twenty feet above high-water mark before ice appears.

ARCHITECTURAL ETCHINGS. — M. Brunet Debaines, the distinguished etcher, has been engaged to prepare a series of six etchings, depicting the following scenes in London: The Interior of the Temple Church; the Fountain Court, Temple; Lincoln's Inn Fields; St. Paul's Cathedral from the river; Corn Barges on the Thames; and Temple Bar.

THE CATHEDRAL AT FLORENCE. — The façade of the duomo of Florence is at last being carried out, and after the designs of De Fabris. The white marble used is from Serraoezza, the green and red from Prato and Serfalco (near Sienna). Subscription-papers are nailed against the staging, and show many names, several for four thousand francs and over; while great numbers of weekly donations of twenty centimes each are collected from poorer subscribers.

THE CATHEDRAL OF NÎMES. — The Cathedral of Nîmes is to be restored, and 50,000 francs have been provided for the purpose. All who know this building — a monument showing the transition from the Romanesqe to the early French Gothic — will agree that but little can be effected with the sum provided.

STRASBOURG CATHEDRAL. — The restoration of the Strasbourg minster is being diligently prosecuted. Behind immense stagings and curtains the painter Steinle is working on the frescos of the choir. The bronze portals will soon be placed in position.

FORTS AND FORTIFICATIONS IN GERMANY. — Great efforts are being made to complete as rapidly as possible the works of the second as well as of the first line of German fortresses. The new forts on the left bank of the Rhine at Cologne, which as originally intended were not to be finished before the end of next year, are already approaching completion, and will be ready to be occupied by their garrisons during the course of the present summer. The girdle of detached works round the fortress is to be completed by forts on the right bank of the river. Plans and designs for these have been drawn up, and contracts for their execution entered into; but the work is to extend over four years. When completed, Cologne will be one of the strongest of German fortresses. At Metz, the fort built since the late war at Woippy, and named by the emperor after his minister of war, Gen. Von Kamecke, has been handed over to the engineers, and armed with guns of large calibre and of the latest pattern. The garrisons of the other forts are also to be increased, in consequence of the increase in the German forces on the French frontier.

A DANISH TOMB. — The Copenhagen correspondent of the *Pall Mall Gazette*, writing on July 20th, says: "A most interesting discovery of antiquarian remains has just been made close to the town of Storeheddinge, in Zealand. About nine feet below the surface of the earth a tumulus was discovered, surrounded as usual with fifteen large stones raised on end, and covered with other large stones, which, when removed, disclosed the interior of the tomb, which was about sixteen feet long and three feet wide. On the bottom was laid a broad piece of oaken plank, on which were found the remains of a woman evidently buried in her clothes, the face turned toward the east, the left arm crossed over the chest, and the right arm stretched out by the side of the body. A large number of vessels of various kinds were placed around the head, the most remarkable being a cup of blue glass, surrounded by a richly chased silver rim representing the leaves of the vine, having an inscription in Greek characters which translated means 'Farewell.' Next may be mentioned another cup of red-colored glass, and a large vase of green glass, besides many pieces of other cups which had been crushed by one of the stones having fallen in. In the blue cup the ribs, and in the red cup other bones, of different kinds of fishes, were discovered. To the right of the head lay a gold coin which had evidently been used as an ear-ring, dating from the reign of the Roman emperor Probus, whose short reign lasted from about the year 276 to 282. The tomb consequently cannot date further back than from A.D. 276. A large and beautifully-embossed ring of gold enclosed the neck, and close to the right shoulder lay a thick golden pin, probably used to hold the upper garment together. On two fingers of the right hand were two massive rings of gold, the one spiral-formed, the other plain, while close to the waist one large and several smaller buckles of silver were discovered. A collection of bones of various animals lay close to the feet of the body, as well as a wooden basin ornamented with bronze handles, containing forty-two dice turned from bone, and apparently used for play. In a large Roman basin of bronze, which stood at the extreme end of the tomb, the bones of a small pig were found, other bones of the same animal being discovered in the surrounding earth, as well as the remains of human beings, possibly bones of slaves who had been sacrificed at the funeral. The discovery is here looked upon as being of the very highest antiquarian importance, while it adds another proof of the relations which so early existed between the north and the south, which were mostly carried on through the present Russian provinces, and which finally, in the eighth or ninth century, culminated in the creation of a special body-guard of the emperor in Constantinople, consisting of the so-called 'Varangians,' — an institution which lasted nearly until the final overthrow of the Byzantine Empire by the Turks. The Government is going to institute further researches round the tomb, as many signs seem to indicate that this place in olden times has been a kind of regal burial-place."

A MOSQUE AT STAMBOUL. — Amongst the mosques of Constantinople is the Mosque of Eyoob, the standard-bearer and companion of the Prophet, who was killed at the siege of Constantinople by the Arabs in 668 A.D. In the last part of the fifteenth century Mohammed II., to whom the position of Eyoob's grave was revealed in a vision, built a tomb and mosque at the spot indicated. Christians are not allowed to enter this holy place: so that they are deprived of the pleasure of seeing one of the finest mosques in or near Constantinople.

THE TAJ MAHUL. — As a memorial of his wife, Moomatza Mahul, the great mogul Shah Jehan built in 1631 upon the banks of the Jumna, at Agra, the celebrated mausolean temple known as the Taj Mahul. It was twenty-two years before the 20,000 workmen could finish it, at a cost of about twenty millions of dollars. The quadrangle in which it stands measures 9,654 feet by 329 feet. The area around is laid out in parterres, planted with flowers, blossoming shrubs, and cypresses, interlaced by rows of bubbling fountains and avenues paved with freestone slabs. The mausoleum itself, the terrace and the minarets, are all of the finest white marble, and are thickly inlaid with precious stones. The funeral vault is a miracle of coolness, softness, splendor, and solemnity. Fergusson says of it, "No words can express the chastened beauty of that central chamber, — the most graceful and the most impressive of all the sepulchres of the world."

FORTIFYING THE ENVIRONS OF ROME. — The works for fortifying the environs of Rome, the appropriations for which were voted at the last session of Parliament, have been commenced on the side nearest the sea. They are considered necessary for the protection of the new capital.

A CITY'S CONSUMPTION OF WATER. — Chicago at present consumes between 60,000,000 and 70,000,000 gallons of water daily.